REMARKS

Applicant thanks the Examiner for the thorough examination given the present application.

Status of the Claims

Claims 1-24 will be pending in the above-identified application upon entry of the present amendment. Claims 1-23 have been amended to correct various typographical and grammatical errors. Claim 24 has been added. Further support for the recitations in claim 1 can be found in the printed publication of the present specification, *inter alia*, at paragraphs [0068]-[0072]. Further support for the recitations in claim 5 can be found in the printed publication of the present specification, *inter alia*, at paragraph [0118]. Further support for the recitations in claim 14 can be found in the printed publication of the present specification, *inter alia*, at paragraphs [0143]-[0147]. Further support for the recitations in claim 19 can be found in the printed publication of the present specification, *inter alia*, at paragraphs [0192]-[0205]. Further support for the recitations in claim 22 can be found in the printed publication of the present specification, *inter alia*, at paragraphs [0227]-[0238]. Further support for the recitations in claim 23 can be found in the printed publication of the present specification, *inter alia*, at paragraphs [0240]-[0242]. Support for new claim 24 can be found in the printed publication of the present specification, *inter alia*, at paragraph [0026]. Thus, no new matter has been added. Based upon the above considerations, entry of the present amendment is respectfully requested.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims.

Priority Under 35 U.S.C. § 119

Applicant thanks the Examiner for acknowledging Applicant's claim for foreign priority under 35 U.S.C. § 119 and receipt of the certified priority document.

Information Disclosure Citation

Applicant thanks the Examiner for considering the references supplied with the Information Disclosure Statement filed January 7, 2005 and for providing Applicant with an initialed copy of the PTO-SB08 form filed therewith.

Drawings

      Applicant thanks the Examiner for indicating that the drawings are accepted.

Claim Objections

      Claims 9-17, 19, and 22-23 are objected to for the reasons provided on pages 2-4 of the outstanding Office Action. The pending claims have been amended herein in order to overcome these issues. As such, Applicant respectfully requests that these objections be withdrawn.

Issues under 35 U.S.C. § 101

      Claims 1-2 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-2 have been amended herein in order to overcome these issues. As such, Applicant respectfully requests that this rejection be withdrawn.

Issues over the Cited References

      1) Claims 1-7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mead '230 (US 4,099,230).

      2) Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mead '230 in view of Potash '847 (US 2002/0103847).

      3) Claims 9-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Burns et al. '036 (US 5,958,036).

      4) Claims 14-16 and 20-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Burns et al. '036 in view of Mead '230.

Legal Standard for Determining Anticipation

      "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001). "The identical invention must be shown in as complete detail as is contained in the ...

claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Legal Standard for Determining Prima Facie Obviousness

      MPEP 2141 sets forth the guidelines in determining obviousness. First, the Examiner has to take into account the factual inquiries set forth in *Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), which has provided the controlling framework for an obviousness analysis. The four *Graham* factors are:

      (a)   determining the scope and content of the prior art;

      (b)   ascertaining the differences between the prior art and the claims in issue;

      (c)   resolving the level of ordinary skill in the pertinent art; and

      (d)   evaluating any evidence of secondary considerations.

Graham v. John Deere, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966).

      Second, the Examiner has to provide some rationale for determining obviousness. MPEP 2143 sets forth some rationales that were established in the recent decision of *KSR International Co. v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007).

      As the MPEP directs, all claim limitations must be considered in view of the cited prior art in order to establish a *prima facie* case of obviousness. *See* MPEP 2143.03.

The Present Invention

      The present invention relates to **multiple computer** technology and in particular to sequence net (SN) computer technology.

      As stated in the background part of the present application (paragraphs [0026]-[0030] and Fig. 2A of the printed publication), an SN refers to parallel programs with distributed structure running on multiple computers, in which a distributed data token is used to coordinate the reading, writing and consistency of the data among the branch programs running on different computers.

The present invention proposes to encapsulate an SN as a Sub SN so as to enable an SN to call a Sub SN, thereby realizing nested SN. This is a brand new idea based on the SN computer technology.

As defined in amended Claim 1, a Sub SN comprises an SN including N+1 branch programs respectively running on N+1 computers and a distributed data token; wherein each of the N+1 branch programs includes a return instruction, and wherein N is a positive integer.

With such an encapsulation, the Sub SN can be called by a parent SN via e.g. a single machine SN calling instruction and each branch program of the Sub SN can be returned via a return instruction after being completely executed.

System Claim 9 now defines a system with computers, SN calling devices and buses for calling the Sub SN of Claim 1, and method Claim 14 defines a method for calling the Sub SN of Claim 1 using the system of Claim 9.

Distinctions over the Cited References

The subject matter of the pending claims is not disclosed or taught by Mead '230, Potash '847, or Burns et al. '036, either individually or in combination.

Mead '230 relates to a method and means for implementing program storage and retrieval in a computer (see col. 1, lines 10-13). Although Mead '230 discloses a nested program segment, it only relates to normal subroutine nesting in a single machine using standard computer instructions. Mead '230 does not mention anything relating to parallel programs running on multiple computers nor does Mead '230 disclose the calling of a Sub SN. Therefore, Mead '230 does not disclose or teach anything relating to the SN as defined in the pending claims.

Potash '847 relates to data communication between multiple concurrently-active threads executing on a multithread processor (see the abstract). It is well known in the art that multithreads are running on a single computer and that the threads are indeed executed in turn rather than simultaneously (see paragraph [0037] as cited by the Examiner). Therefore, Potash '847 does not disclose or teach anything relating to the SN as defined in the pending claims.

Burns et al. '036 relate to an apparatus for arbitrating the selection of an interrupt for servicing from a plurality of interrupts according to priority. First of all, the Burns et al. '036 reference is not related to SN or Sub SN as defined in the pending claims of the present invention at all. Secondly, Burns et al. '036 disclose the contention of multiple interrupts. In contrast, the

present invention relates to the contention of multiple Sub SN calling instructions. Since the calling of a Sub SN is far different from the conventional interrupt contention in view of the technical field, it is not obvious for one of ordinary skill in the art to transplant the contention of interrupts into the calling of the Sub SN. Thirdly, the present invention does mention interrupt, but it is to distribute an interrupt to the multiple computers so that the computers can stop current work to execute the called Sub SN, which is totally different from the contention of interrupts from multiple devices.

Accordingly, Mead '230, Potash '847, and Burns et al. '036 do not relate to the SN with multiple branch programs running on multiple computers, and further, none of the cited references relates to the calling of a Sub SN for realizing nesting in a multiple computer environment.

Accordingly, the present invention is not anticipated by Mead '230 or Burns et al. '036 since the references do not teach or provide for each of the limitations recited in the pending claims.

Moreover, a *prima facie* case of obviousness has not been established. To establish a *prima facie* case of obviousness of a claimed invention, all of the claim limitations must be disclosed by the cited references. As discussed above, Mead '230, Potash '847, and Burns et al. '036 fail to disclose all of the claim limitations of the pending claims. Accordingly, the combinations of references do not render the present invention obvious.

Furthermore, the cited references or the knowledge in the art provide no reason or rationale that would allow one of ordinary skill in the art to arrive at the present invention as claimed. Therefore, withdrawal of the outstanding rejections is respectfully requested. Any contentions of the USPTO to the contrary must be reconsidered at present.

Allowable Subject Matter

Applicant acknowledges the indication of allowable subject matter of claims 12-13, 17-19, and 22-23 if rewritten into independent form and the objections are overcome. However, for the reasons indicated above, all pending claims are believed to be directed to allowable subject matter.

New Claim 24

Claim 24 has been added for the Examiner's consideration. Applicant respectfully submits that claim 24, which depends from independent claim 1, is allowable for the reasons given above. In addition, claim 24 recites further limitations which are not disclosed or made obvious by the cited references.
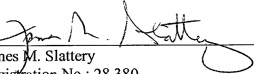

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad M. Rink, Registration No. 58,258, at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

Dated: January 4, 2011

Respectfully submitted,

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